

Enriching the Academic Experience



Students can:

- Design and race a MagLev vehicle
- Compete to answer science-related questions
- Construct bridges and test their carrying capacity
- Contemplate the value of science in society
- Use the scientific method to solve a problem

Elementary School Science Fair

Every year, over 100 Suffolk County schools take part in BNL's Elementary School Science Fair. Students who win their school science fair may be entered into the BNL contest by their school coordinator. Nearly 500 projects, created by students ranging from kindergarten to 6th grade, compete.

The student projects are judged by BNL scientists and elementary school teachers.

The winner (one for each grade level) is awarded a medal and a banner that can be displayed alongside the schools' sports banners. Honorable mention medals are also awarded and each student receives a ribbon for participating in the fair.

Middle School MagLev Contest

Long Island, like so many areas, has traffic congestion problems. Many experts believe the best way to solve this problem is to design new transportation systems. One approach is to develop "MAGLEV" vehicles which float over a fixed track, supported (levitated) and driven by magnetic fields. This is like flying with lift provided by magnets instead of wings.

In this contest, students will learn about MAGLEV technology and use math, science, and technology principles to optimize the design of a MAGLEV vehicle. In school, students will design and construct a vehicle and complete a Student Design Portfolio.

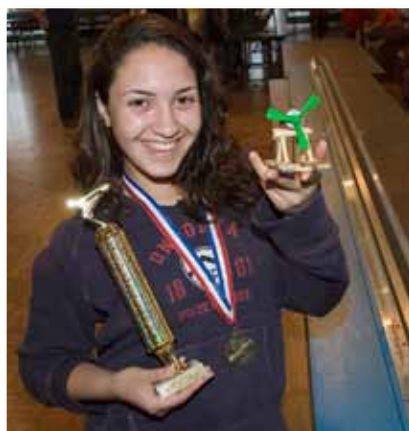
Students compete for a trophy in one of seven categories: wind power, self-propelled balloon, self-propelled other, electrified track, gravity, scale model appearance, and futuristic appearance.

Middle School Science Bowl



The U.S. Department of Energy's National Middle School Science Bowl® is a two-part, highly publicized competition. It involves a model car competition utilizing an alternative energy source and a math and science academic competition. Annually, more than 5,000 students participate in 36 regional competitions throughout the nation. The winners of Brookhaven's regional competition are sent to Washington D.C. to compete in the national competition.

In the academic competition, teams of middle school students answer questions on scientific topics in earth science, physical science, life science, math, and general science. The teams are comprised of five students (one of whom is an alternate) and a teacher, who acts as an advisor and coach. The competition consists of a round robin followed by a single-elimination final. Questions are in the form of multiple choice and short answer. The alternative energy model car competition challenges students to design, build, and race their cars.



Science & Society Essay Contest

The Science and Society Essay Contest challenges high school students to question and deliberate the purpose and social implications of scientific research.

Essays are expected to contain substantive, well-reasoned arguments (rather than simply opinions) that indicate a depth of understanding of scientific and societal issues.

All high school students (9th-12th grade) who attend school in Suffolk or Nassau County are eligible.

Monetary prizes will be awarded. All students who submit essays will receive a Certificate of Participation.

High School Science Bowl

The U.S. Department of Energy National Science Bowl® is an academic competition that tests students' knowledge in all areas of science and mathematics. Brookhaven National Laboratory hosts an annual regional competition. High school students who attend school on Long Island are eligible.

The teams are comprised of five students and a teacher, who serves as an advisor and coach. Entries of teams will be accepted on a first-come, first-served basis until all available slots in the competition are filled. The competition consists of a round robin followed by a double-elimination final. The questions are multiple choice and short answer in the categories of chemistry, biology, physics, mathematics, astronomy, earth science, and computer science.

Prizes are awarded to the top four teams, and the winning team is invited to participate in the National Science Bowl. All students who participate will receive a Certificate of Participation.

Bridge Contest

High school students from Long Island submit their bridges to the ultimate pressure test and compete to take part in a national contest.

The construction and testing of model bridges promotes the study and application of principles of physics and engineering and it also helps students develop "hands on" skills. By participating, students get a flavor of what it is to be an engineer, designing structures to a set of specifications and then seeing them perform their function.

There will be prizes for first, second, and third place as well as an aesthetic award for bridge design. First and second place winners will be sponsored by the Brookhaven Science Associates for participation in the national bridge competition.

Further Information

Visit our website for detailed contest information: www.bnl.gov/education

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